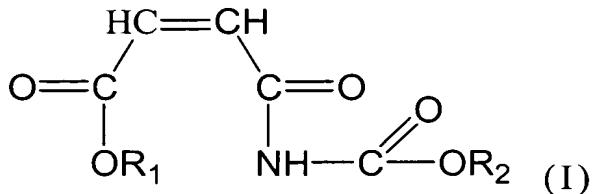


## WHAT IS CLAIMED IS:

1. A bicarboxyl monomer of formula (I),



wherein R<sub>1</sub> and R<sub>2</sub> independently is H, alkali metal, or NH<sub>4</sub>.

5        2. The bicarboxyl monomer as claimed in claim 1, wherein said alkali metal is sodium or potassium.

10      3. A process for preparing a bicarboxyl monomer, mainly comprising the following steps:

- (a)        providing an organic solution containing maleic anhydride;
- (b)        adding ammonium carbamate to said organic solution;
- (c)        heating said organic solution to form a precipitate;
- (d)        filtrating said solution to obtain said precipitate;
- 15      (e)        dissolving said precipitate in water and adjusting the pH between 9 to 11; and
- (f)        removing the water in step (e) and drying the product to obtain bicarboxyl monomer.

20      4. The process as claimed in claim 3, wherein said organic solution in step (a) is a solution of acetone.

5. The process as claimed in claim 3, wherein the concentration of maleic anhydride in said organic solution in step (a) ranges from

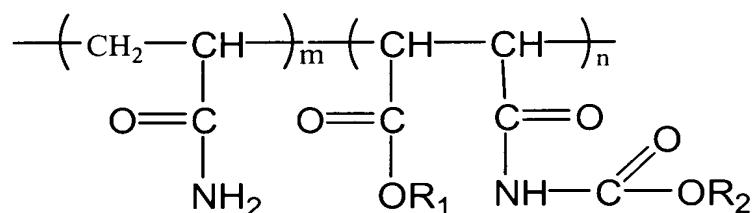
12 wt% to 25 wt%.

6. The process as claimed in claim 3, wherein the concentration of ammonium carbamate in said organic solution in step (b) ranges from 10 wt% to 20 wt%.

5 7. The process as claimed in claim 3, wherein said heating temperature in step (c) ranges from 40 to 60°C.

8. The process as claimed in claim 3, wherein the pH value of said solution in step (e) is adjusted by adding ammonium hydroxide of a concentration between 0.5 N to 1.5 N.

10 9. A bicarboxyl copolymer of formula (II):



(II)

wherein R<sub>1</sub> and R<sub>2</sub> is independently H, alkali metal, or NH<sub>4</sub>; m is an integral from 10 to 5000; and n is an integral from 10 to 3000.

15 10. The bicarboxyl copolymer as claimed in claim 9, wherein said alkali metal is sodium or potassium.

11. A process for preparing a bicarboxyl copolymer, mainly comprising the following steps:

(a) providing an aqueous solution (1) containing ammonium 4-carboxylamino-4-oxo-2-butene and acrylamide, and an aqueous solution (2)

20

containing potassium persulfate and sodium thiosulfate; wherein the molar ratio of ammonium 4-carboxylamino-4-oxo-2-butenate to acrylamide in said solution (1) ranges from 1:0.1 to 1:10, and the molar ratio of potassium persulfate to sodium thiosulfate in said solution (2) ranges from 3: 1 to 7:1;and

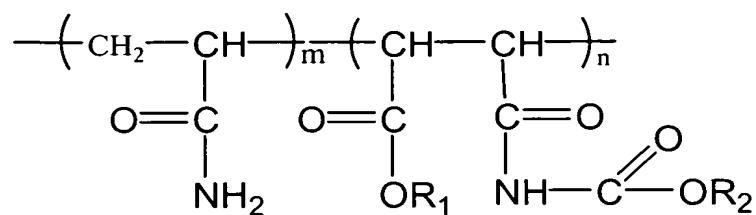
(b) adding solution (2) to solution (1) to form a mixture, and then sealing said mixture for 5 to 100 hours to form a copolymer of 4-carboxylamino-4-oxo-2-butenate / acrylamide (PCOB).

12. The process as claimed in claim 11, wherein the molar ratio of ammonium 4-carboxylamino-4-oxo-2-butenate to acrylamide in solution (1) ranges from 1:1 to 1:6.

13. The process as claimed in claim 11, wherein the molar ratio of potassium persulfate to sodium thiosulfate in solution (2) ranges from 4:1 to 6:1.

14. The process as claimed in claim 11, wherein said duration for sealing is 30 to 85 hours.

20 15. A copolymer dispersant composition, comprising a bicarboxyl copolymer of formula (II):



(II)

wherein R<sub>1</sub> and R<sub>2</sub> independently is H, alkali metal, or NH<sub>4</sub>; m is an integral from 10 to 5000; and n is an integral from 10 to 3000.

5        16. The copolymer dispersant composition as claimed in claim 15,  
           wherein said alkali metal is sodium or potassium.

17. The copolymer dispersant composition as claimed in claim 15,  
           which is used for preparing ceramic powder slurry.

18. The copolymer dispersant composition as claimed in claim 17,  
           wherein said ceramic powder is barium titanate powder.

10      19. The copolymer dispersant composition as claimed in claim 17,  
           wherein said ceramic powder is aluminum oxide powder.

20. The copolymer dispersant composition as claimed in claim 17,  
           wherein said ceramic powder is zirconium oxide powder.

15